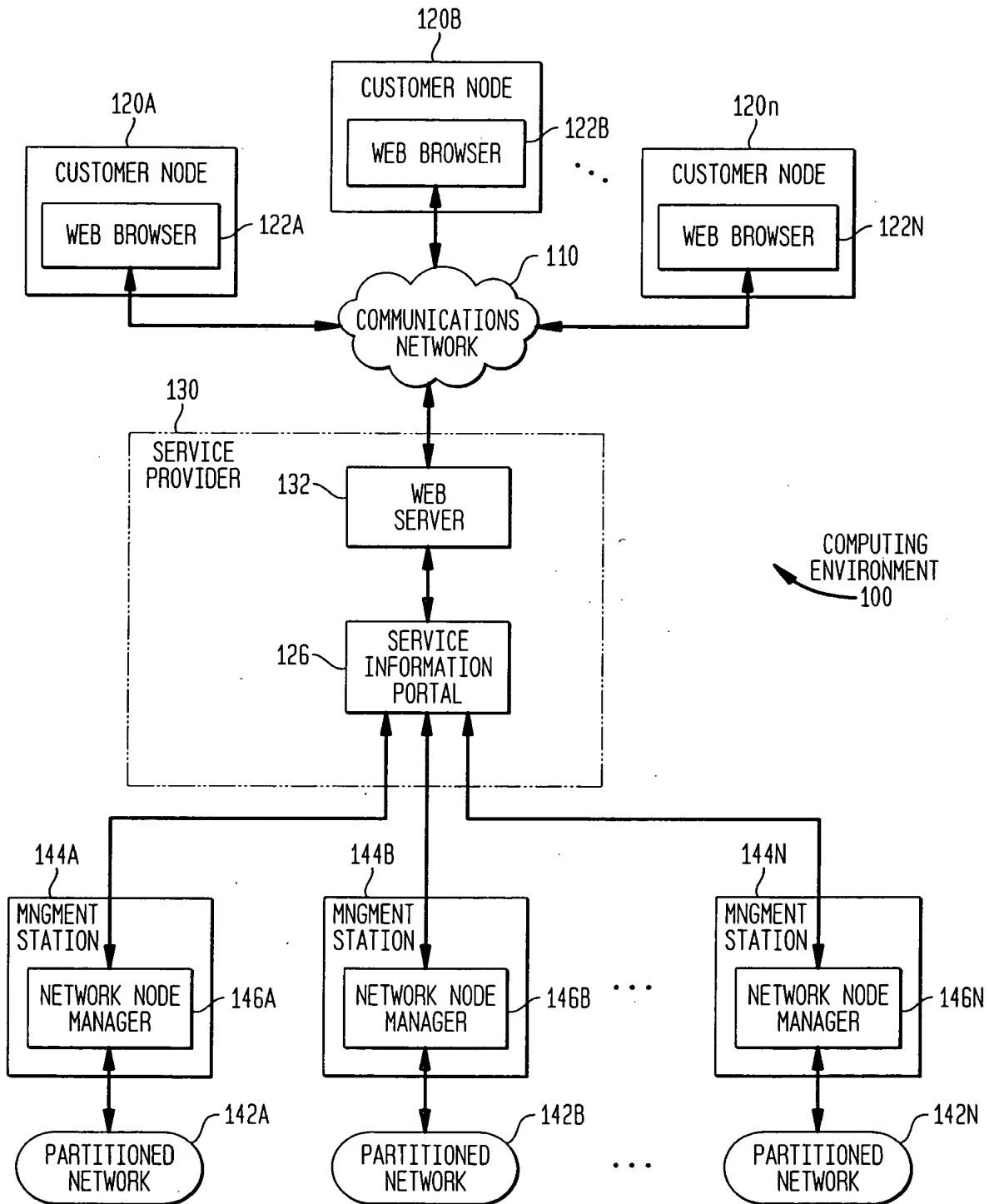


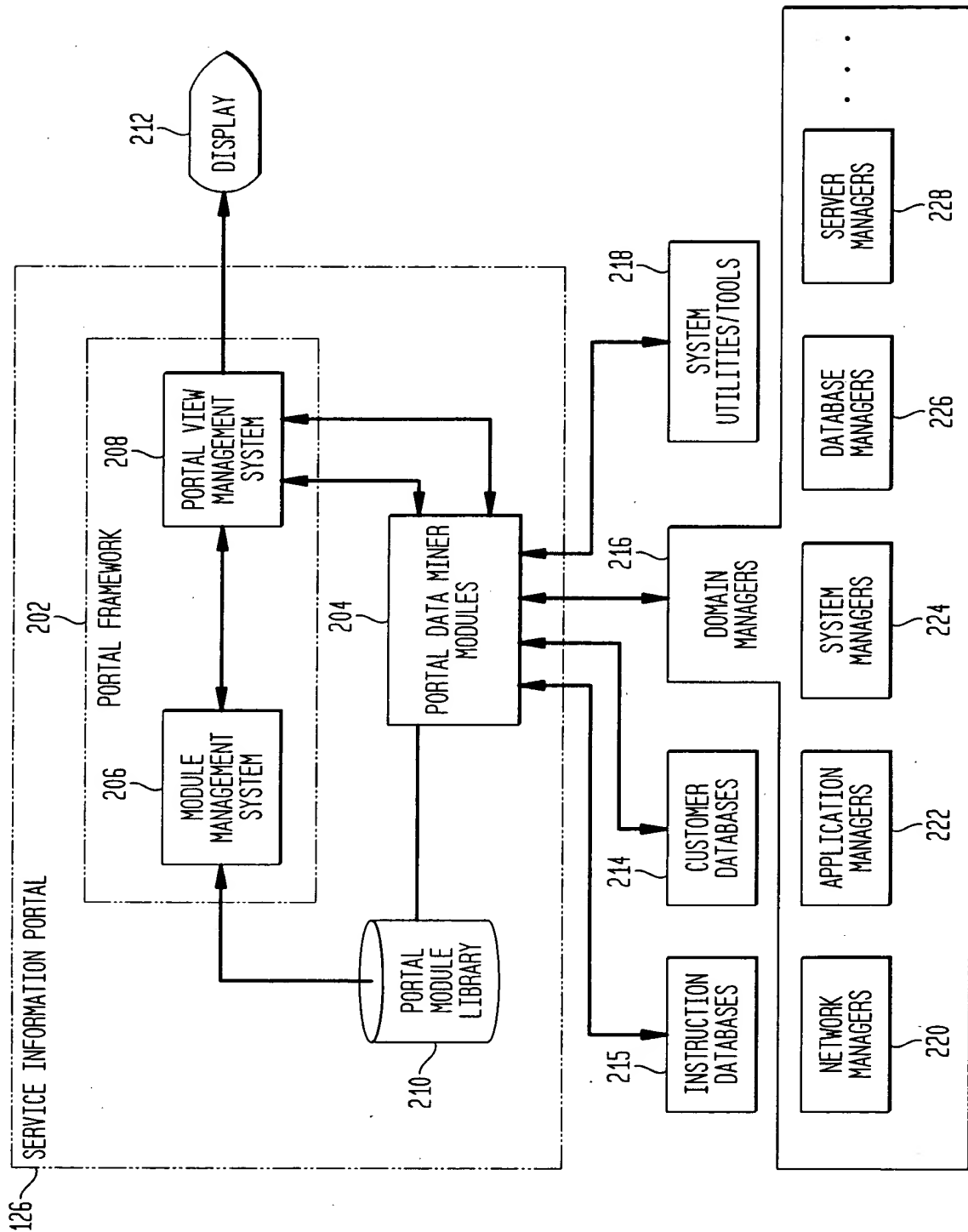
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FIG. 1



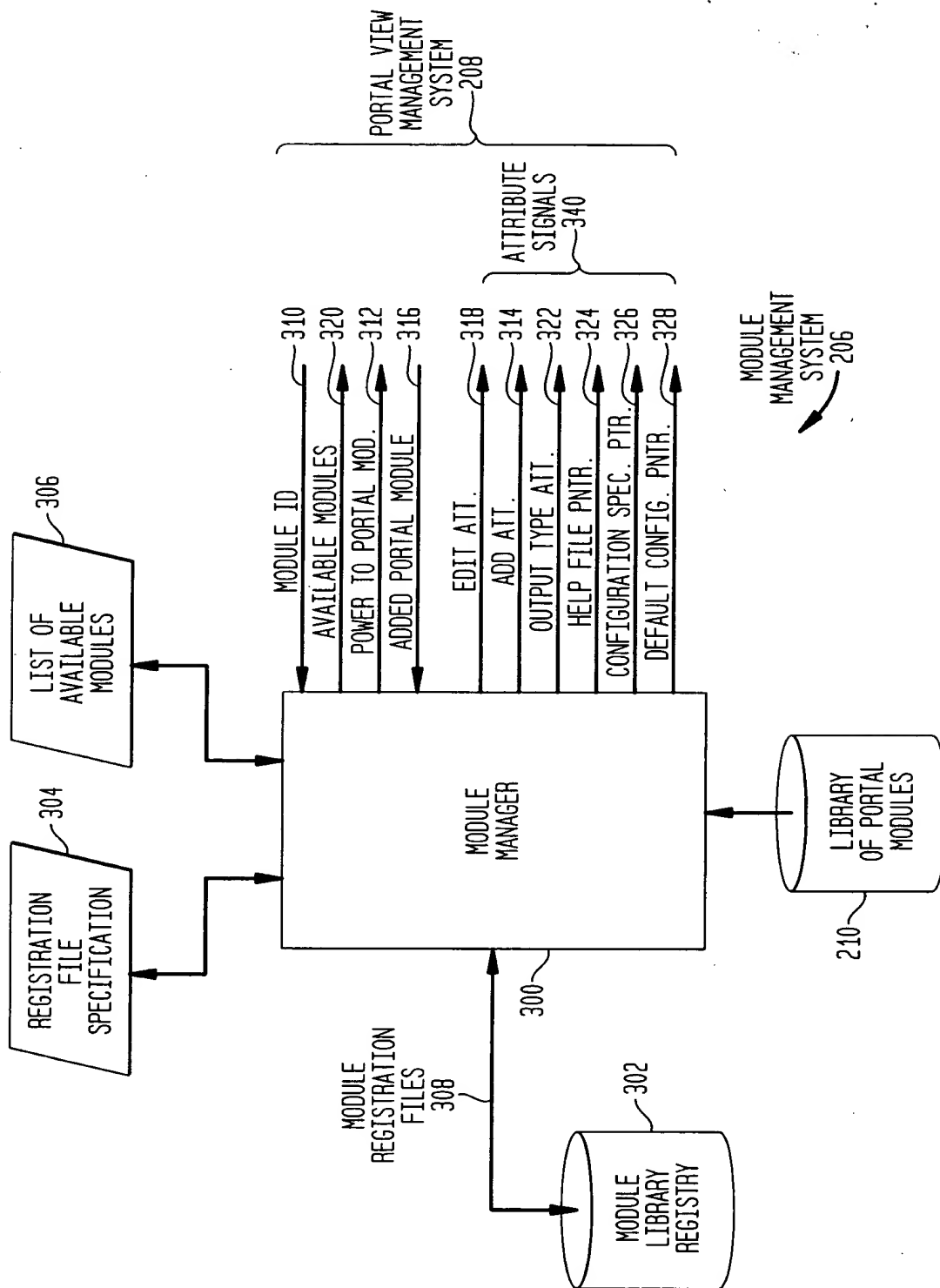
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FIG. 2



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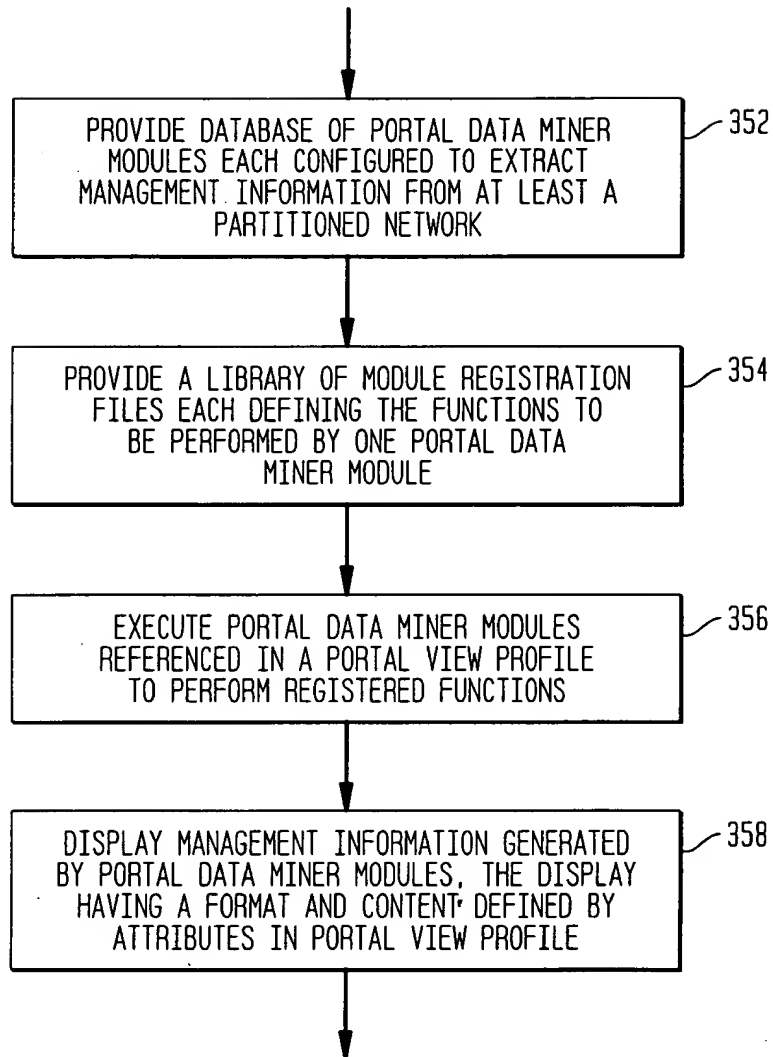
FIG. 3A



Inventor(s): Robert Raymond

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FIG. 3B



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FIG. 4

MODULE REGISTRATION
FILE SPECIFICATION
400

```
1  <!-- OVMModuleRegistration.dtd -->
2  <!-- Copyright (c) 2000 Hewlett-Packard
3  Company -->
4  <!-- $Revision: /main/BACCHUS/8 $ -->
5  <!-- $Date: 2001/03/15 00:13 UTC $ -->
6  -----
7  <!ELEMENT ModuleRegistration EMPTY>
8
9  <!ATTLIST ModuleRegistration
10     vendorName      CDATA #IMPLIED
11     vendorURL       CDATA #IMPLIED
12     description     CDATA #IMPLIED
13     version         CDATA #IMPLIED
14     category        CDATA "General"
15     title           CDATA #IMPLIED
16     classid         ID #REQUIRED
17     implementation   CDATA #REQUIRED
18     outputType      (narrow|NARROW|wide|WIDE|any|ANY) "narrow"
19     add              (1|0|YES|yes|NO|no) "no"
20     edit             (1|0|YES|yes|NO|no) "no"
21     help            CDATA #IMPLIED
22     configDTD       CDATA #IMPLIED
23     defaultConfigXML CDATA #IMPLIED
24
25
26
```

HEADER
DATA
402

404

ATTRIBUTE
LIST
406

Inventor(s): Robert Raymond

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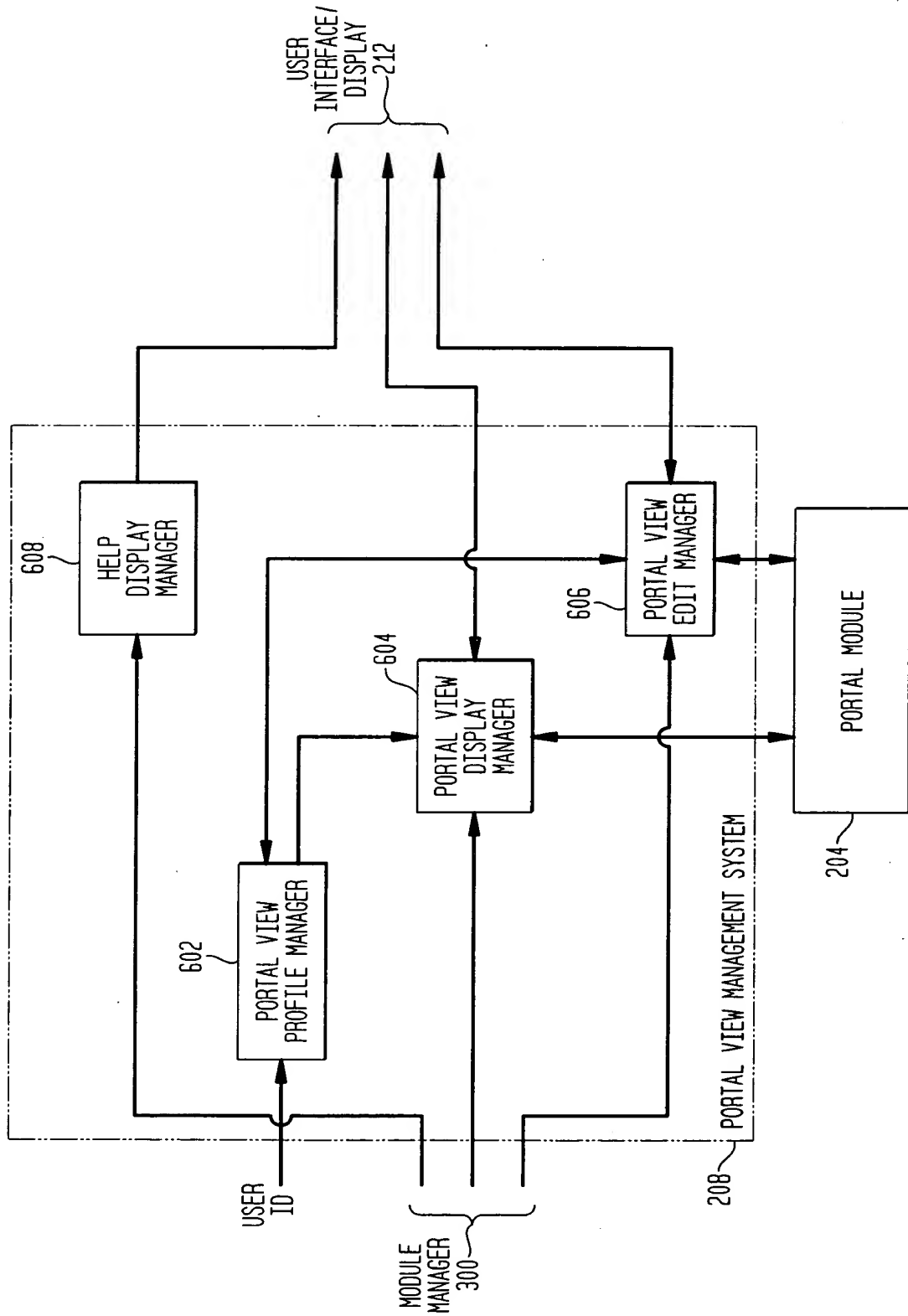
FIG. 5

NETWORK HEALTH MODULE
REGISTRATION FILE
500

```
1 <?xml version="1.0" standalone="no"?>
2 <!DOCTYPE ModuleRegistration SYSTEM
3 "OVModuleRegistration.dtd">
4 <ModuleRegistration
5   vendorName  ="Hewlett-Packard
6               Company"
7   vendorURL   ="http://www.
8               openview.hp.com"
9   description ="HP OpenView SIP Network
10              Device Health Module"
11   version     ="2.0"
12   category    ="NNM"
13   title       ="Network Device
14               Health"
15   classid     ="com.hp.ov.portal.
16               modules.health"
17   implementation
18               ="/servlet/com.hp.ov.
19               portal.modules.health.
20               HealthServlet"
21   outputType  ="narrow"
22   add         ="yes"
23   edit        ="yes"
24   help        ="/OvSipDocs/C/help/
25               NNM/healthView.html"
26   configDTD   ="OVNetworkHealth.dtd"
27   defaultConfigXML
28               ="defaults/
29               OVDefaultNetHealth.
30               xml"
31 />
```

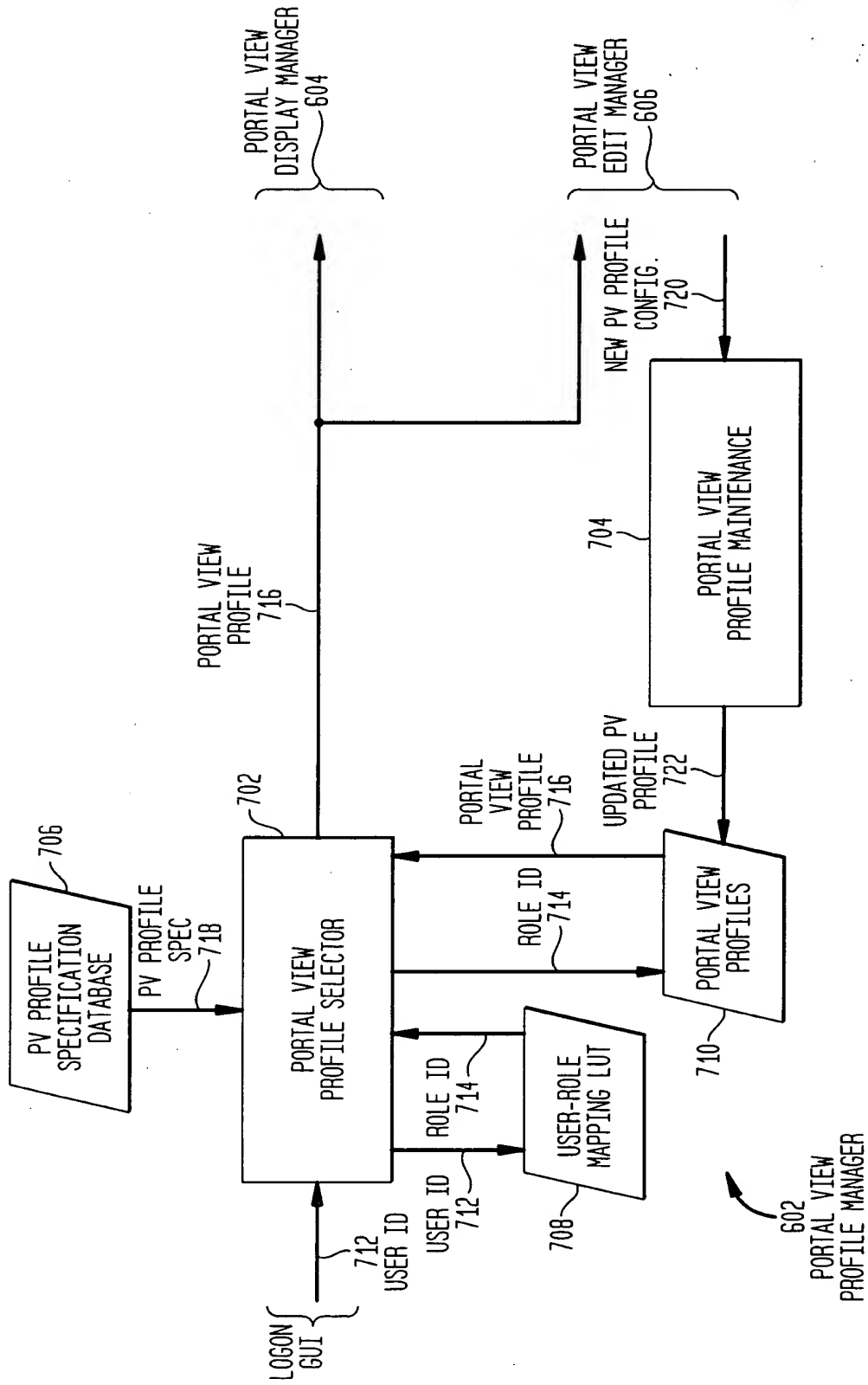
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FIG. 6



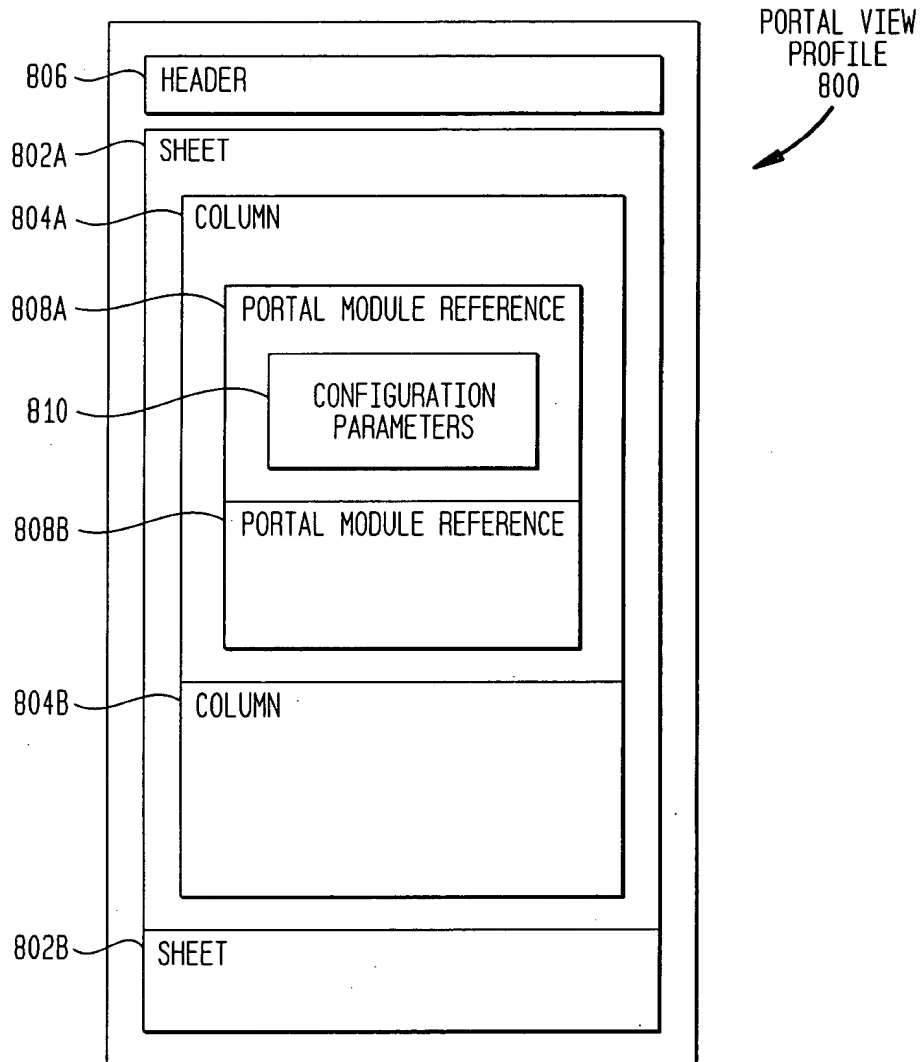
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FIG. 7



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FIG. 8



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FIG. 9

NETWORK HEALTH PORTAL
VIEW PROFILE SPECIFICATION

900

```
1 <!-- OVNetworkHealth.dtd
2 <!-- Copyright (c) 2000 Hewlett-Packard
3 Company
4 <!-- $Revision: /main/BACCHUS/7 $
5 <!-- $Date: 2001/04/11 20:41 UTC $
6 <!--
7 <!ELEMENT NetworkHealth (Summary+)>
8 <!ATTLIST NetworkHealth
9     showRawData      (yes|no|YES|NO|1|0) "no"
10    showUnknown      (yes|no|YES|NO|1|0) "no"
11 >
12
13 <!ELEMENT Summary (Component+,
14 (NodeSelection | InterfaceSelection))>
15 <!ATTLIST Summary
16     id              CDATA #REQUIRED
17     title           CDATA #REQUIRED
18     display         (yes|no|YES|NO|1|0) "yes"
19     displayDepth    (1|2|3) "3"
20 >
```

HEADER
902

NETWORK HEALTH
ELEMENT SPEC.
904

SUMMARY ELEMENT
SPEC.
906

Inventor(s): Robert Raymond

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FIG. 10A

PORTAL
VIEW PROFILE
1000

| | | |
|----|---|---------------|
| 1 | <?xml version="1.0" encoding="UTF-8"?> | HEADER |
| 2 | <!DOCTYPE PortalView SYSTEM | 1002 |
| 3 | "../PortalView.dtd"> | |
| 4 | <PortalView | PORTAL VIEW |
| 5 | colorScheme="/OvSipDocs/styles/default.css" | WINDOW |
| 6 | defaultSheetID="NetworkSheet" | ATTRIBUTES |
| 7 | refreshRate="5000" showDateTime="yes" | 1004 |
| 8 | showUserName="yes" userName="Any User"> | |
| 9 | <Sheet id="NetworkSheet" title="Network"> | |
| 10 | <Column width="narrow"> | |
| 11 | <ModuleInstance | PORTAL MODULE |
| 12 | classid="com.hp.ov.portal.modules.health" | REFERENCE |
| 13 | display="yes" id="NetworkHealth" | 1006A |
| 14 | rollupState="down"> | |
| 15 | <NetworkHealth showRawData="no" | |
| 16 | showUnknown="no"> | |
| 17 | <Summary display="no" | |
| 18 | displayDepth="3" id="InterfaceHealth" | |
| 19 | title="Interface Health"> | |
| 20 | <Component href="#IfStatus" | |
| 21 | vital="yes" weight="2"/> | |
| 22 | <Component href="#IfUtil" | |
| 23 | vital="no" weight="1"/> | |
| 24 | <Component href="#IfInErrors" | |
| 25 | vital="no" weight="1"/> | |
| 26 | <Component | |
| 27 | href="#IfOutErrors" vital="no" weight="1"/> | |
| 28 | <InterfaceSelection | |
| 29 | id="AllInterfaces" op="AND" title="All | |
| 30 | Interfaces"/> | |
| 31 | </Summary> | |

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FIG. 10B

PORTAL
VIEW PROFILE
1000

PORTAL MODULE
REFERENCE
1006A (CONT)

```
32      <Summary display="yes"
33 displayDepth="3" id="RouterHealth"
34 title="Router Health">
35      <Component href="#IfHealth"
36 vital="no" weight="1"/>
37      <Component
38 href="#CiscoCpuUtil" vital="no" weight="1"/>
39      <NodeSelection id="Routers"
40 op="AND" title="Routers">
41      <CapabilityFilter op="OR">
42      <Capability
43 field="isRouter" value="true"/>
44      </CapabilityFilter>
45      </NodeSelection>
46      </Summary>
47      <Summary display="no"
48 displayDepth="3" id="KeyDeviceHealth"
49 title="Key Device Health">
50      <Component href="#IfHealth"
51 vital="no" weight="1"/>
52      <NodeSelection
53 id="KeyDevices" op="AND" title="Key Devices">
54      <CapabilityFilter op="OR">
55      <Capability
56 field="isKeyDevice" value="true"/>
57      </CapabilityFilter>
58      </NodeSelection>
59      </Summary>
```

Inventor(s): Robert Raymond

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FIG. 10C

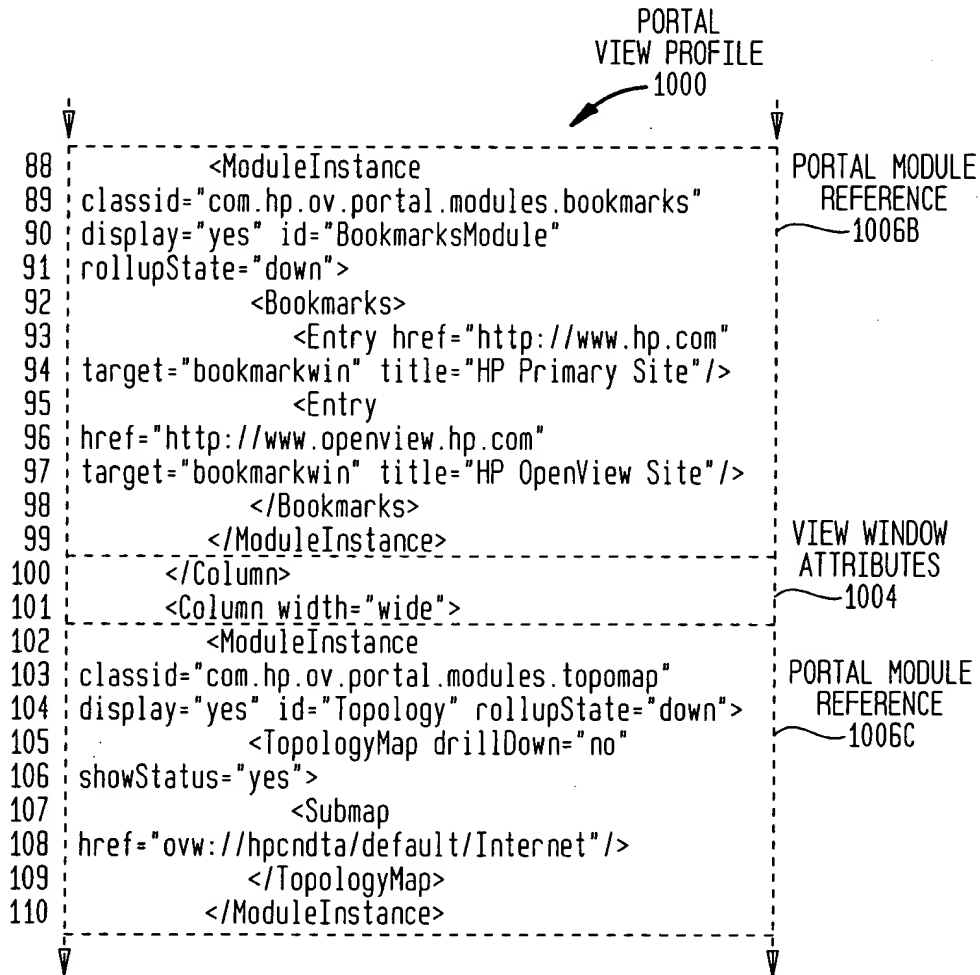
PORTAL
VIEW PROFILE
1000

PORTAL MODULE
REFERENCE
1006A (CONT)

```
60      <Summary display="no"
61 displayDepth="3" id="CPEHealth" title="CPE
62 Health">
63      <Component href="#IfHealth"
64 vital="no" weight="1"/>
65      <NodeSelection id="CPE"
66 op="AND" title="Customer Premise Equipment">
67      <CapabilityFilter op="OR">
68      <Capability
69 field="isCPE" value="true"/>
70      </CapabilityFilter>
71      </NodeSelection>
72      </Summary>
73      <Summary display="no"
74 displayDepth="3" id="ServerHealth"
75 title="Server Health">
76      <Component href="#IfHealth"
77 vital="no" weight="1"/>
78      <NodeSelection id="Servers"
79 op="AND" title="Servers">
80      <CapabilityFilter op="OR">
81      <Capability
82 field="isServer" value="true"/>
83      </CapabilityFilter>
84      </NodeSelection>
85      </Summary>
86      </NetworkHealth>
87      </ModuleInstance>
```

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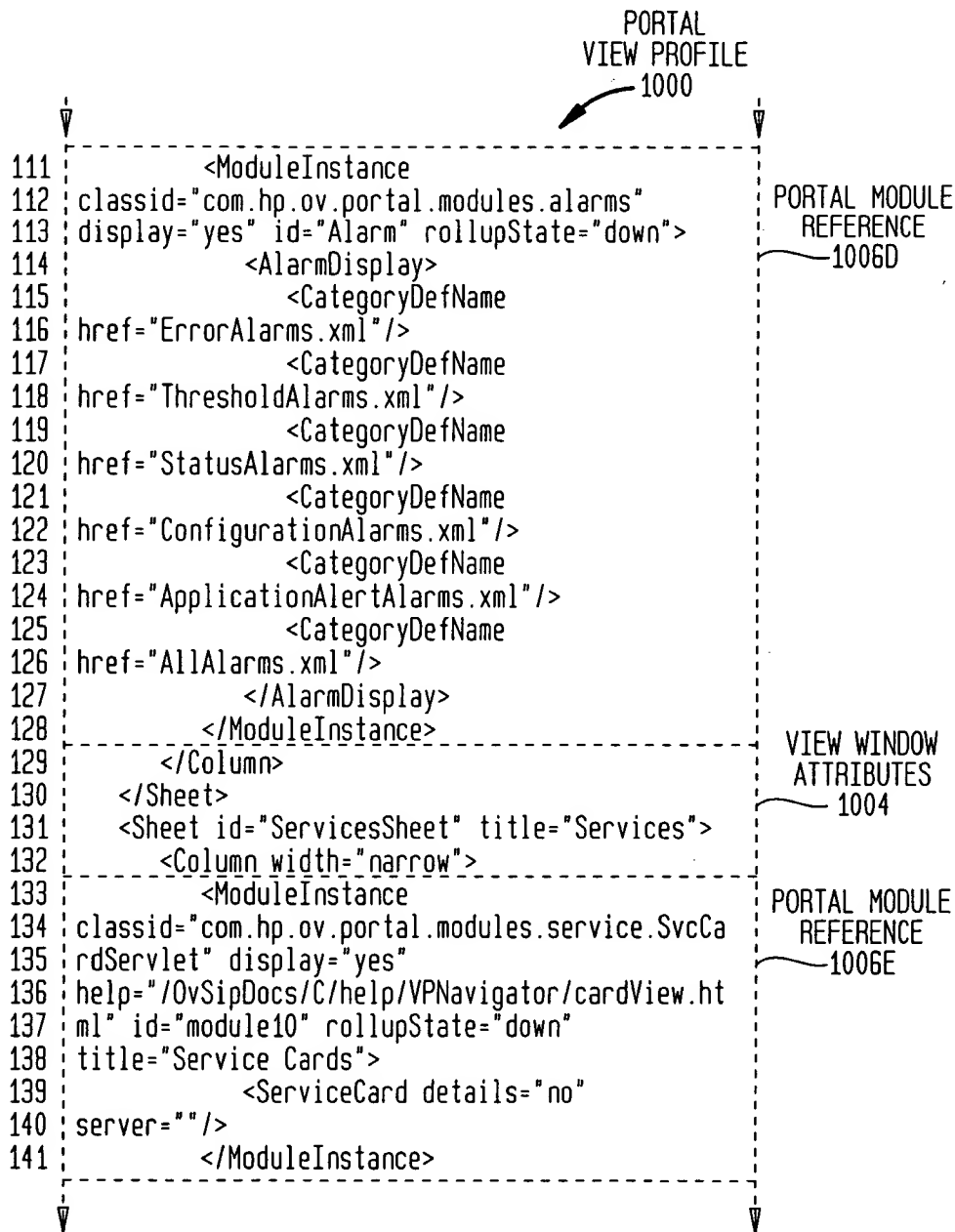
FIG. 10D



Inventor(s): Robert Raymond

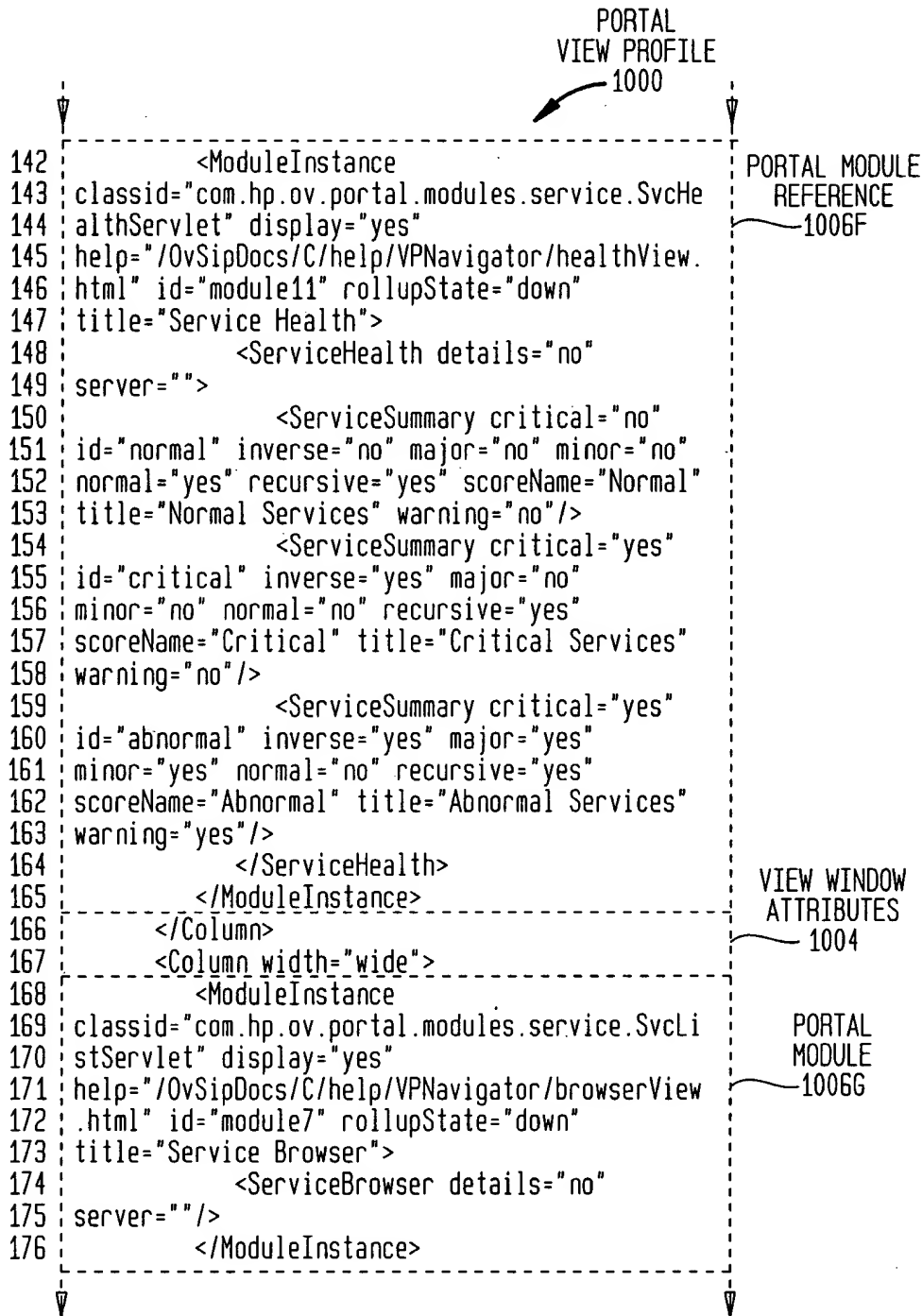
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FIG. 10E



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FIG. 10F



Inventor(s): Robert Raymond

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FIG. 10G

PORTAL
VIEW PROFILE
1000

| | | |
|-----|---|----------------------------|
| 177 | <ModuleInstance | |
| 178 | classid="com.hp.ov.portal.modules.service.SvcGr | |
| 179 | aphServlet" display="yes" | PORTAL MODULE REFERENCE |
| 180 | help="/OvSipDocs/C/help/VPNavigator/graphView.h | 1006H |
| 181 | tml" id="module8" rollupState="down" | |
| 182 | title="Service Graph"> | |
| 183 | <ServiceGraph server="" /> | |
| 184 | </ModuleInstance> | VIEW WINDOW ATTRIBUTES |
| 185 | </Column> | 1004 |
| 186 | </Sheet> | |
| 187 | </PortalView> | |

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FIG. 11

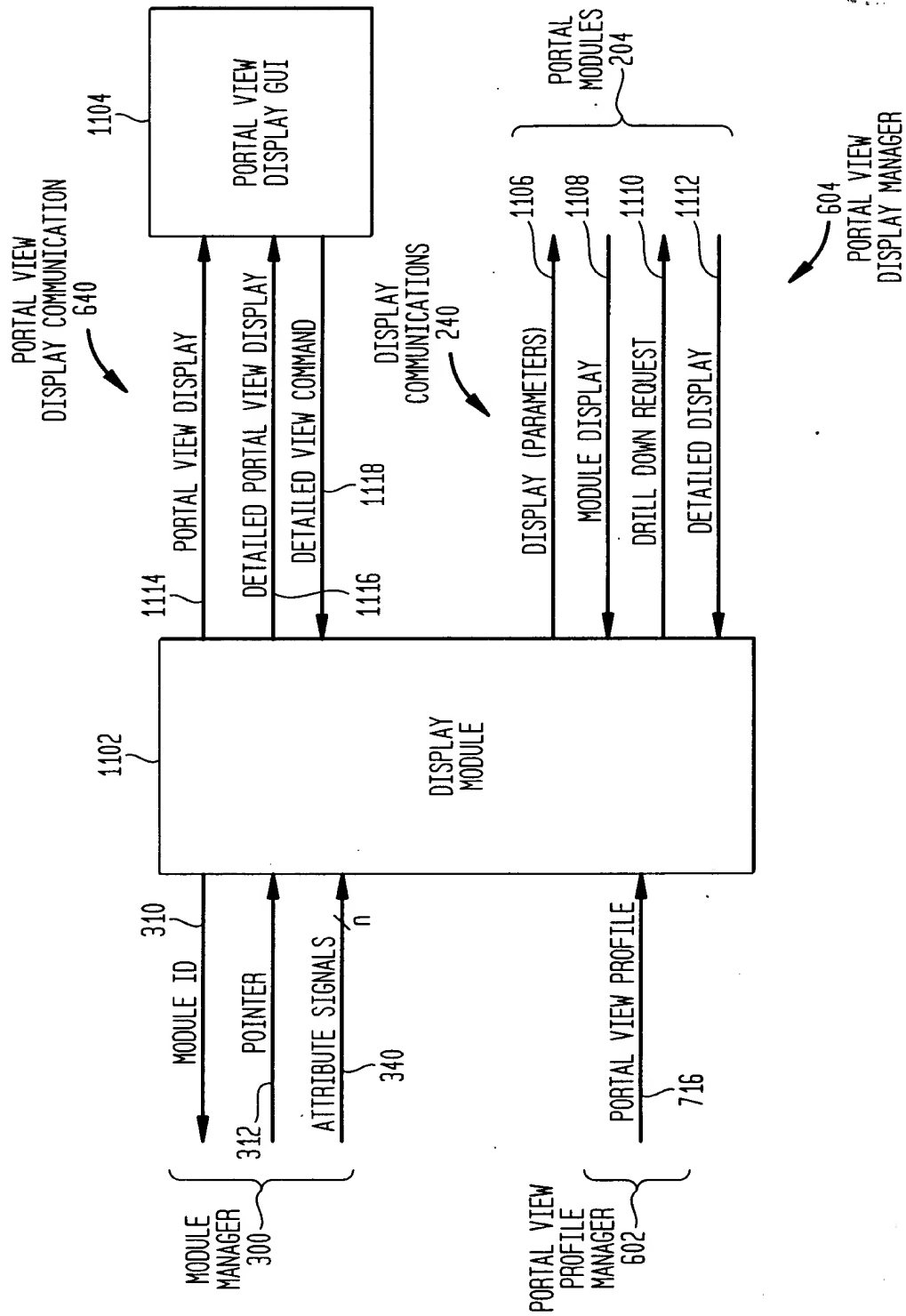


FIG. 12

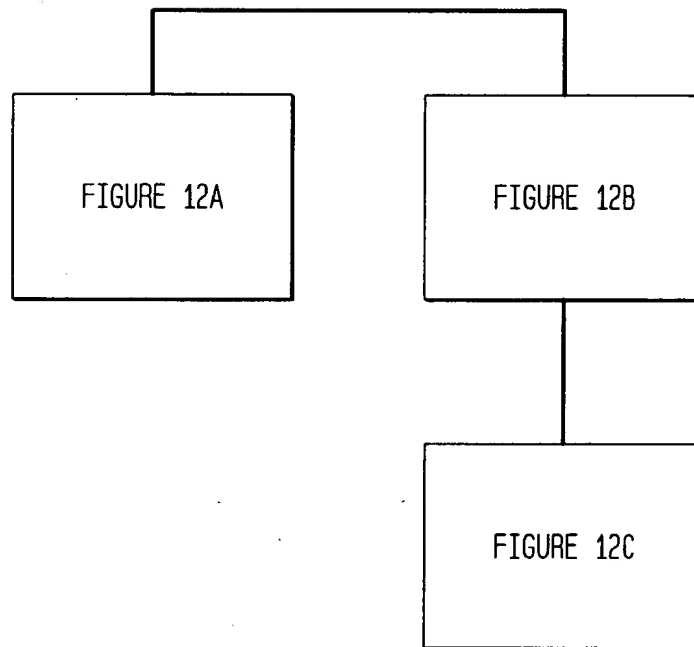


FIG. 12A

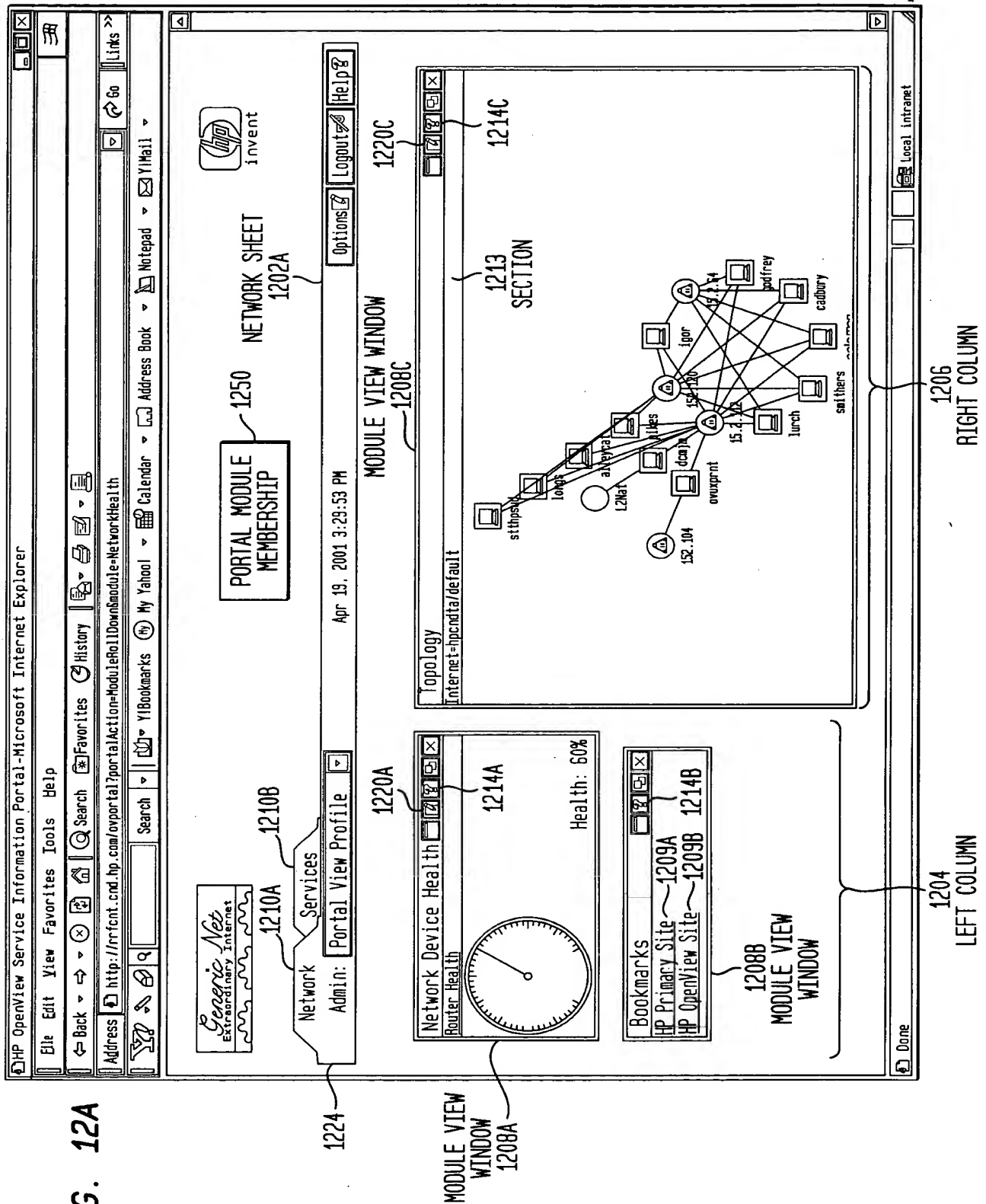


FIG. 12B

NETWORK
SHEET
(CONT)
1202A

MODULE
VIEW WINDOW
1208D

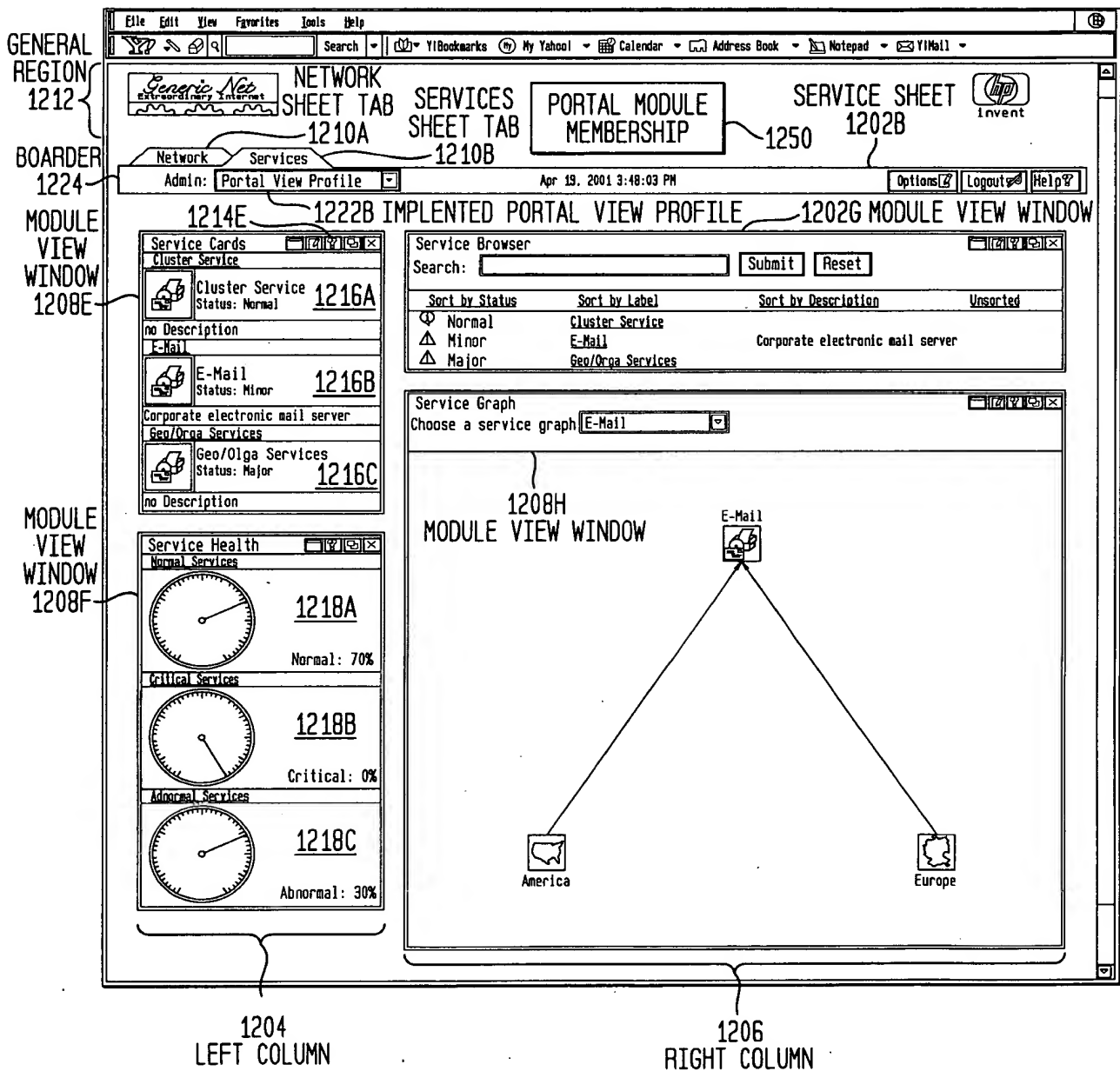
| Alarms | | |
|---|--------------------|---|
| Error Alarms 4 Alarms | | |
| Thursday, April 19, 2001 9:23:09 AM MDT | krazy.cnd.hp.com | Agent in distress: spinning in ifTable Aborting request! Consider unmanaging node. |
| Monday, April 16, 2001 1:59:49 AM MDT | krazy.cnd.hp.com | Agent in distress: spinning in ifTable Aborting request! Consider unmanaging node. |
| Wednesday, April 18, 2001 6:37:19 PM MDT | hpcndta.cnd.hp.com | pmd lost contact with ovalarmsrv: pid 6586 ungracefully disconnected from pmd with 0 pending events: Error on socket #42 src:ovalarmsrv pid:6586: Lost connection with pmd/ovEvent process (application disconnected) |
| Configured to display 3 alarms, 3 received. | | |
| Threshold Alarms 0 Alarms | | |
| Status Alarms 0 Alarms | | |
| Data currently unavailable | | |
| Configuration Alarms 0 Alarms | | |
| Data currently Unavailable | | |
| Application Alert Alarms 17 Alarms | | |
| Thursday, April 19, 2001 10:53:34 AM MDT | hpcndta.cnd.hp.com | Network Node Manager license expires on Mon 08 Oct 2001 03:39:27 PM MDT. |
| Thursday, April 19, 2001 10:53:34 AM MDT | hpcndta.cnd.hp.com | Network Node Manager license expires on Mon 08 Oct 2001 03:39:27 PM MDT. |
| Tuesday, April 17, 2001 10:51:39 AM MDT | hpcndta.cnd.hp.com | Network Node Manager license expires on Mon 08 Oct 2001 03:39:27 PM MDT. |
| Configured to display 3 alarms, 3 received. | | |
| All Alarms 0 Alarms | | |
| Data currently unavailable | | |

1204 LEFT COLUMN

1206 RIGHT COLUMN

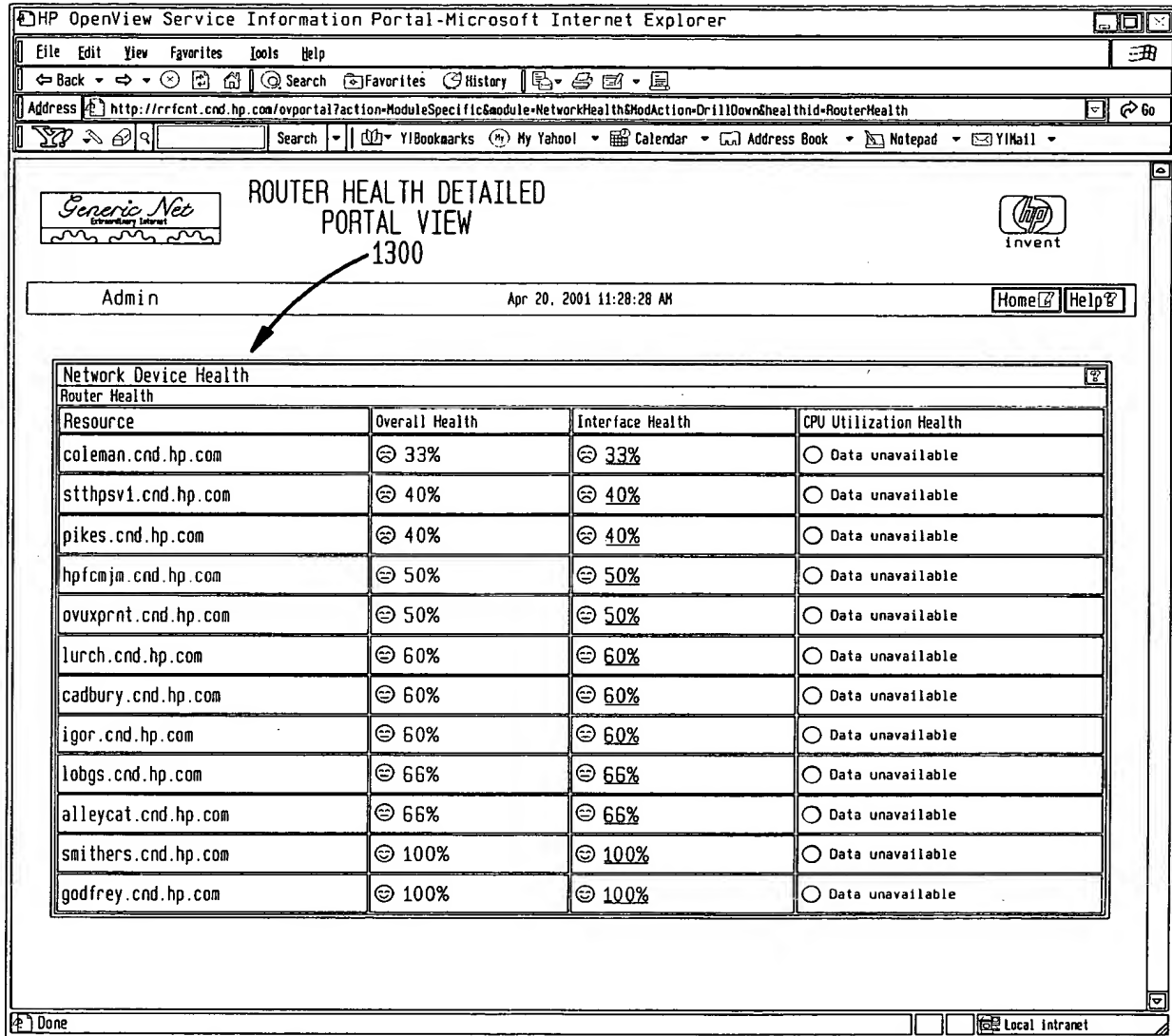
Done Local intranet

FIG. 12C



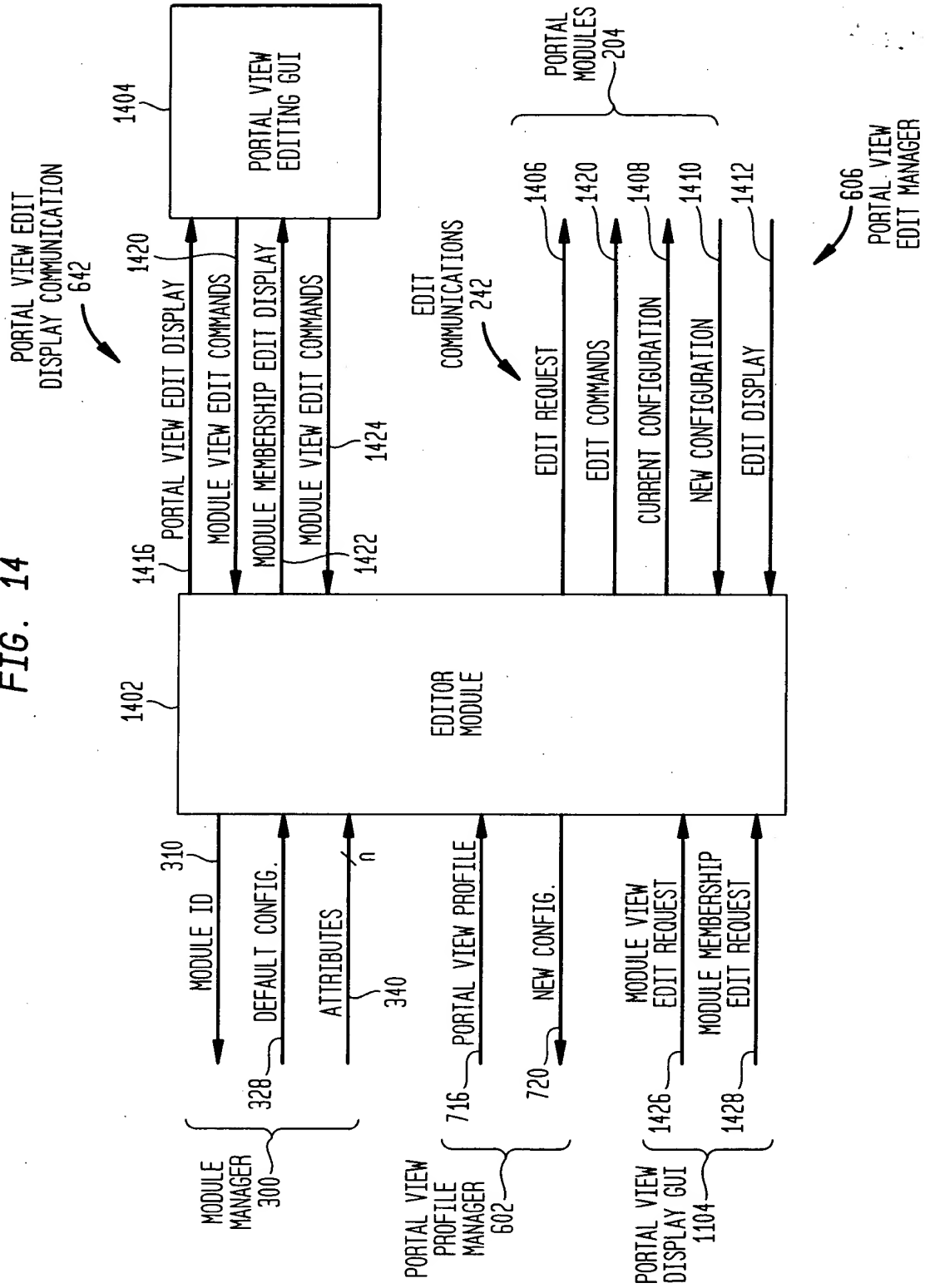
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FIG. 13



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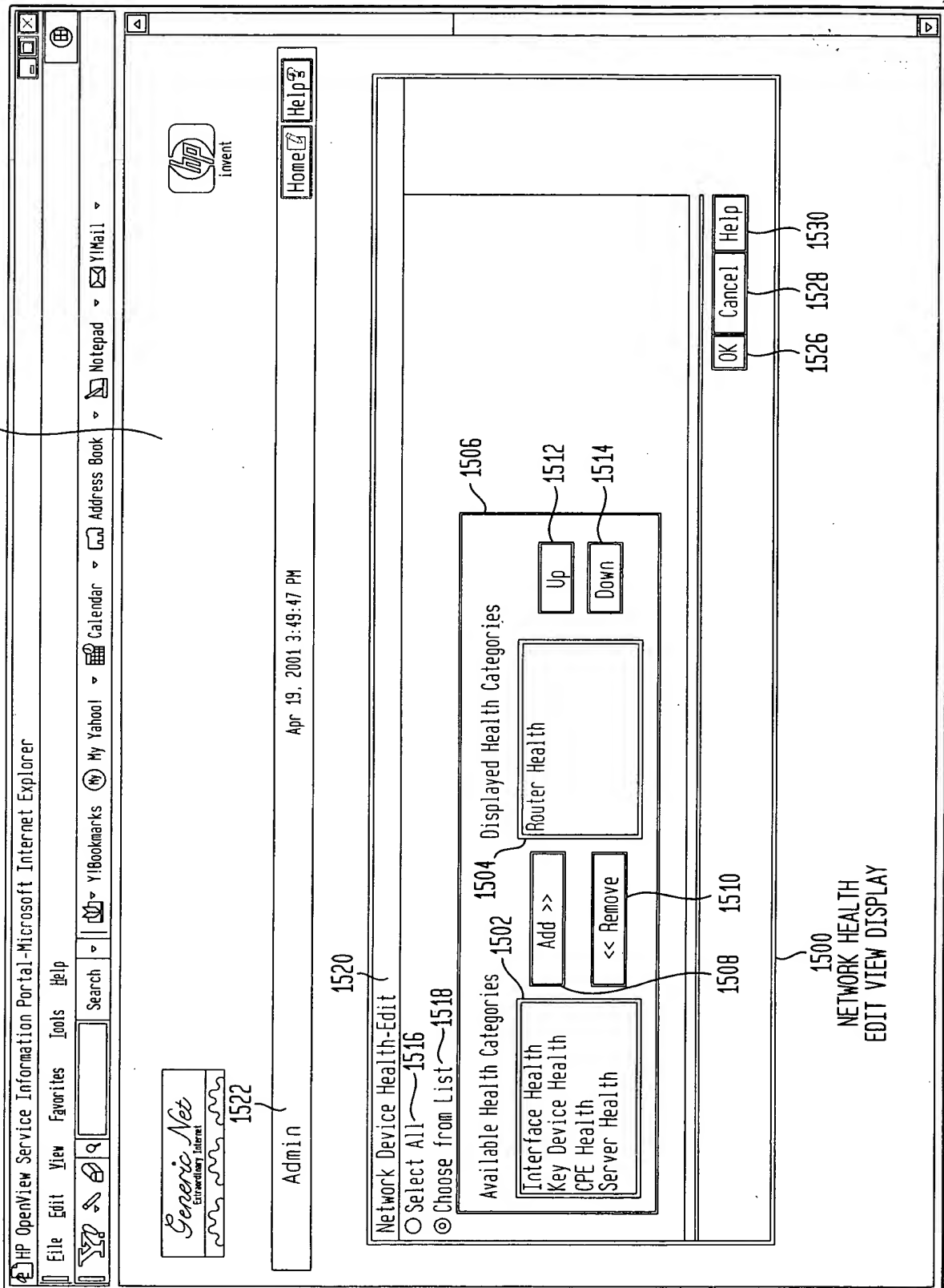
FIG. 14



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FIG. 15

1524



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FIG. 16

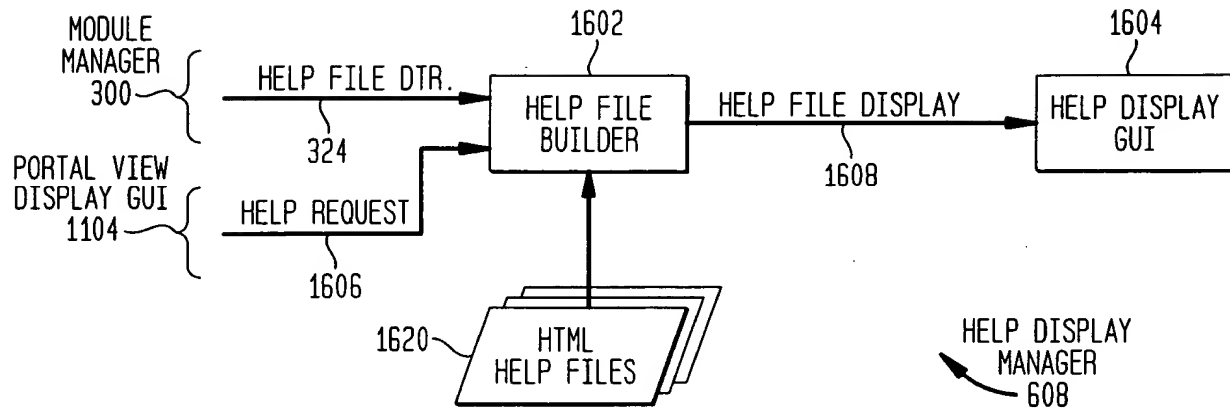
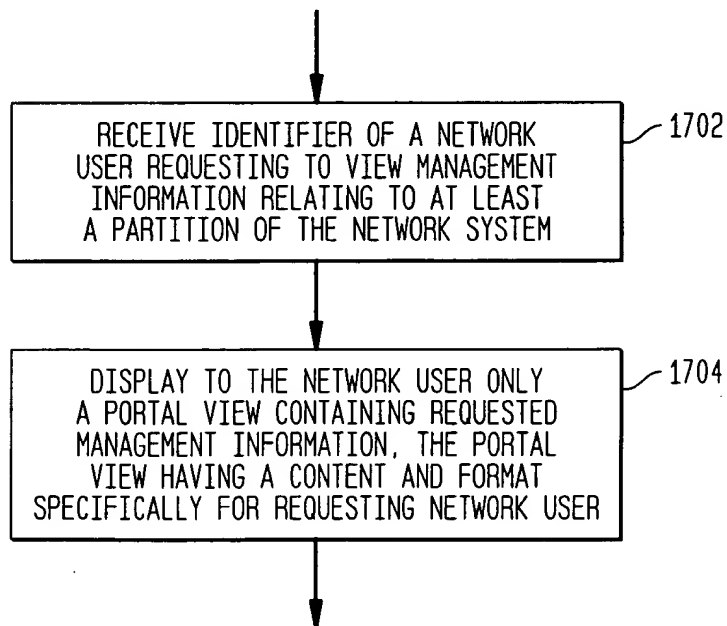
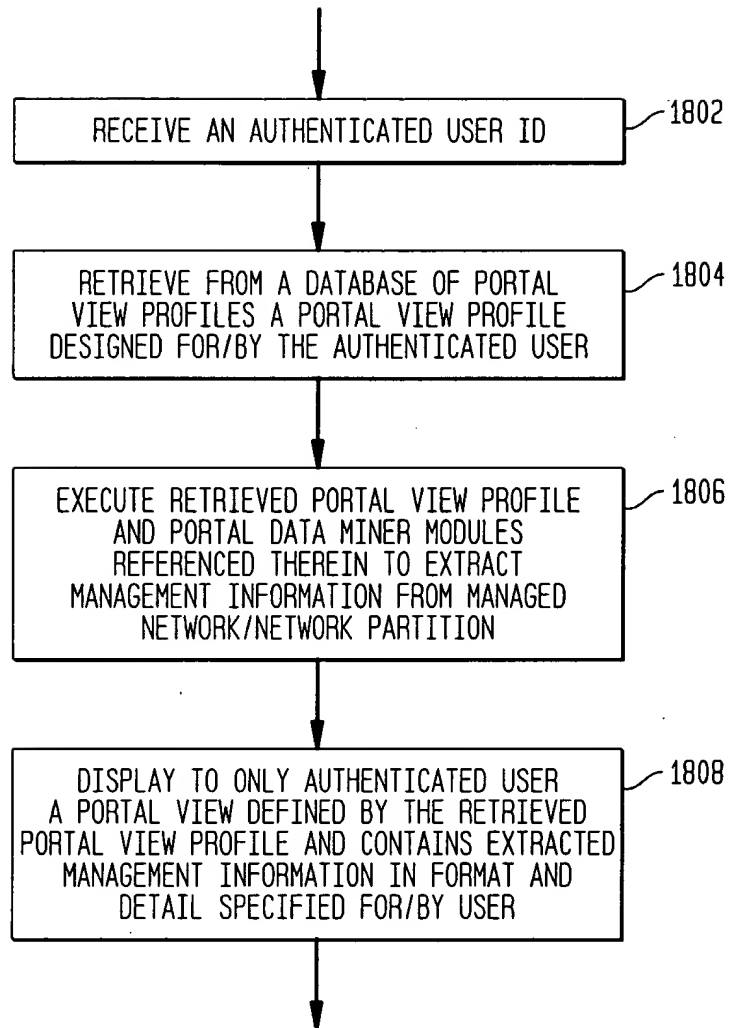


FIG. 17



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FIG. 18



Inventor(s): Robert Raymond

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FIG. 19

